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THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)

Leonel Yanez MARTINEZ et al.)

Serial No. 10/613,433)

Group Art Unit: 2831

Filed: JULY 3, 2003)

Examiner: William Mayo II

Title: **DRY WATER RESISTANT
COAXIAL CABLE AND METHOD
OF MANUFACTURE THEREOF**)

**APPELLANTS' BRIEF
UNDER 37 C.F.R. §41.37**

Docket No. MX/JFServ-001)

SUPPLEMENTARY MATERIAL TO APPEAL BRIEF

Assistant Commissioner for Patents
Washington D.C. 20231

Sir:

Attached is the Table comparing the invention and the cited prior art. The Table was referenced in the Appeal Brief and was inadvertently omitted in the mailing of the Appeal Brief.

In the event that there are any problems which can be expedited by telephone conference, the Examiner is invited to telephone the Appellants' undersigned attorney at the telephone number listed below.

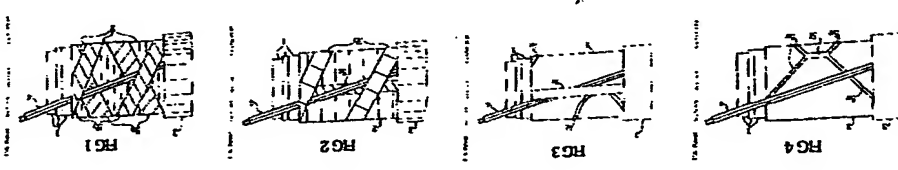
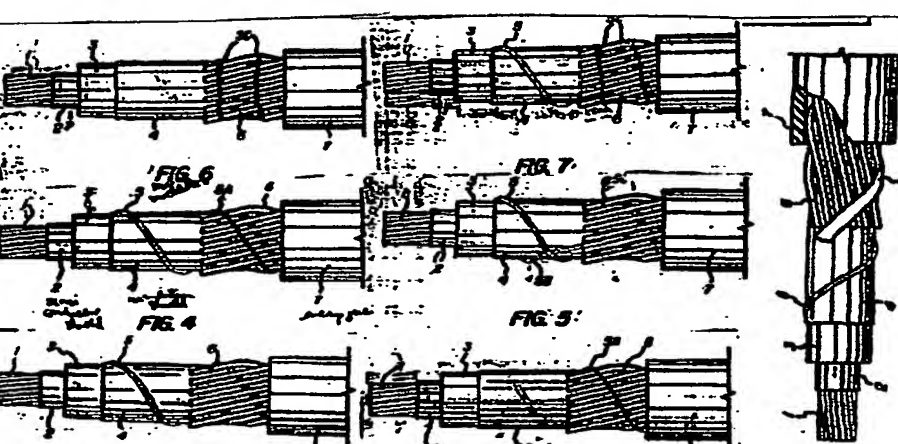
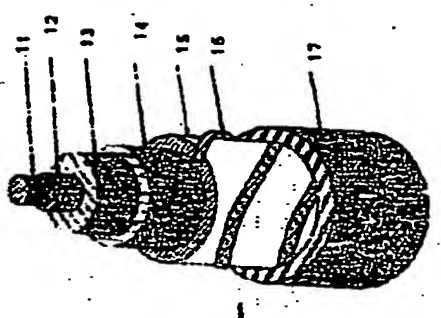
Respectfully submitted,
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| | INVENTION | CHAN US 5,486,648 | BELL US 6,455,769 | GOEHLICH US 6,784,371 |
|--|---|--|---|---|
| <p>Claims (Cable Structure & Elements)</p> | <p>Claim 68 A dry, water resistant coaxial cable <u>consisting of</u>:</p> <p>a) metal core conductor (11);</p> <p>b) dielectric element</p> <p>1st layer (12) of low density polyethylene mixed with vinyl or acrylic adhesive;</p> <p>2nd layer (13) based on expanded polyethylene and swelling agent selected from azodicarbonamide, p-toluene sulphonylhydrazide or 5-phenyltetrazol;</p> <p>Optionally, reinforcement layer (14) of the same characteristics as the 1st layer;</p> <p>external conductor (15) formed by a tape made of aluminum or copper alloy or combined with other elements surrounding the conductor;</p> <p>water penetration protective element (16) based on one or more swellable fibers or tapes formed by polyester threads or other swellable fibers; protective cover (17) based on low, medium or high density polyethylene or combinations thereof.</p> <p><u>Structure Configuration (order of appearance)</u></p> <p>metal core conductor (11)</p> | <p>Claim 1 An electrical power cable <u>having concentric neutral wires (6)</u> applied helically over cable construction extending in a longitudinal direction to provide a metallic ground shield and having protective polymeric jacket over said concentric neutral wires characterized in that at least one continuous elongated water swellable element (5) chosen from a group consisting of yarn, strand, filament, and strip, is provided in contact with the concentric neutral wires as to block the passage of water within the cable in longitudinal direction.</p> <p><u>Structure Configuration (order of appearance)</u></p> <p>Conductor (1)</p> <p>Semiconductor shield (2)</p> <p>Insulation layer (3)</p> <p>Semiconductivity insulation shield (4)</p> <p>Water swellable yarn (5)</p> <p>Concentric neutral wires (6)</p> <p>Encapsulating jacket (7)</p> | <p>Claim 1 Electrical cable <u>comprising</u>:</p> <p>conductor (1); at least one insulating layer (3); outer metal shield (6) and a layer of expanded polymer material (5) placed under metal shield; characterized in that the layer of expanded polymer material is semiconductive and includes water swellable material wherein the expanded layer material has a degree of expansion between 5% and 500%.</p> <p>Claim 2 Cable according to Claim 1 wherein expanded layer has a predetermined degree of expansion so as to ensure elastic absorption of radial forces of thermal expansion and contraction of cable and maintain semiconductive properties</p> <p><u>Structure Configuration (order of appearance)</u></p> <p>Conductor (1)</p> <p>Inner semiconductive layer (2)</p> <p>Insulating layer (3)</p> <p>Compact semiconductive layer (4)</p> <p>Expanded layer (5)</p> <p>Metal shield (6)</p> <p>Outer sheath (7)</p> | <p>Claim 1 A cable <u>comprising</u> a cable core (1); an inner cable sheath (2); outer cable sheath (3); sensor (4) and a structured material between inner cable sheath and outer sheath arranged to allow any detectable substance entering between the inner cable sheath and outer cable sheath travel along the perimeter of inner cable sheath to reach sensor</p> <p><u>Structure Configuration (order of appearance)</u></p> <p>cable core (1)</p> <p>inner cable sheath (2)</p> <p>outer cable sheath (3); sensor (4)</p> <p>structured material (5)</p> |

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| <p>1st layer (12) 2nd layer (13) reinforcement layer (14) external conductor (15) water penetration protective element (16) protective cover (17)</p> |  |
| <p>Figures</p> |  |

| | | | |
|-------------------------|---|--|--|
| Structure Configuration | <p>FIG. 2</p> | | |
| Core conductor | Core conductor (11) made of copper plated aluminum wire with uniform circular cross section of 3.15 ±0.03 mm dia | Conductor (1) made of copper or aluminum | Copper wires |
| Key elements | All elements in Claim 1 | Concentric neutral wires CN (6); Specification emphasized CN is critical | "Structured Material" and sensor |
| Material | No Fillers; 1 st layer (12) and 2 nd layer are made of low density polyethylene (LDPE); External conductor (5) made of tape of Al or Cu alloy | Shield (2) & Insulation (3) made of crosslinked polyethylene elastomer (XLPE), ethylene propylene rubber (EPR), Ethylene vinyl acetate (EVA) | Infinite list of "structured material" Cols. 4-6 Examples use self adhesive or one strip shaped sputtered adhesives |
| Adsorption data | ≥15 ml/g/min speed; >30 ml/g capacity | Uses Fillers Infinite list of "expanded layer" material (5). Col. 4-8 Examples 1-4 list EVA-EPR, PVC, XLPE | No disclosure |